

Problem 1

Choose the best graph to fit each of the ten situations described below. (Particular graphs may fit more than one situation.) Copy the graph, label your axes and explain your choice, stating any assumptions you make. If you cannot find the graph you want, draw your own version.

1. "Prices are now rising more slowly than at any time during the last five years."
2. "I quite enjoy cold milk or hot milk, but I loathe lukewarm milk!"
3. "The smaller the boxes are, then the more boxes we can load into the van."
4. "After the concert there was a stunned silence. Then one person in the audience began to clap. Gradually, those around her joined in and soon everyone was applauding and cheering."
5. "If cinema admission charges are too low, then the owners will lose money. On the other hand, if they are too high then few people will attend and again they will lose. A cinema must therefore charge a moderate price in order to stay profitable."

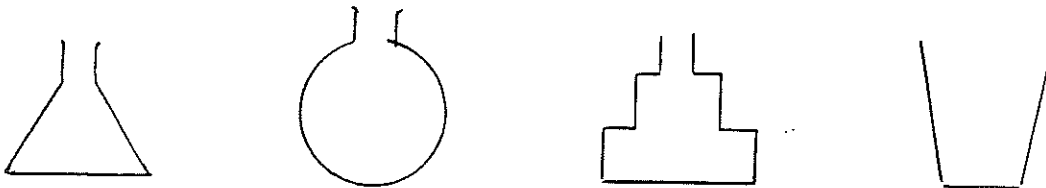
In the following situations, you have to decide what happens. Explain them carefully in words, and choose the best graph, as before.

How does...

6. the cost of a bag of potatoes depend on its weight?
7. the diameter of a balloon vary as air is slowly released from it?
8. the time for running a race depend upon the length of the race?
9. the speed of a girl vary on a swing?
10. the speed of a ball vary as it bounces along?

Problem 2

Water is being poured steadily into these vessels:



Draw a graph which shows the relationship between the height of the water and the volume that has been poured in.

